There are three PPPO-related items in the most recent EM Update newsletter. The items can be accessed directly at the following links:

- EM Site Puts Environmental Database Online
- Portsmouth Site Breaks Ground For Waste Disposal
- Two EM Contractors Are Among Fiscal Year 2015 Small Business Award Winners

The full newsletter is below.

EM Update | Vol. 8, Issue 11 | June 15, 2016

EM Marks Progress on Facilities, Outlines Safe Startup and Commissioning Plans

Panelists at the event for the House Nuclear Cleanup Caucus included, left to right, Parsons Senior Vice President and Salt Waste Processing Facility Project Manager Frank Sheppard, EM Principal Deputy Assistant Secretary Mark Whitney, and Bechtel National Inc. Waste Treatment Plant (WTP) Project Director Peggy McCullough.

WASHINGTON, D.C. – Leadership from EM and its contractors highlighted measurable progress on major cleanup facilities across the complex and discussed a safe and successful path forward for startup and commissioning at an event for the House Nuclear Cleanup Caucus on June 8.

"With construction now complete at the Savannah River Site's Salt Waste Processing Facility (SWPF), the Hanford Direct Feed Low Activity Waste (DFLAW) initiative moving forward, and the Waste Isolation Pilot Plant (WIPP) progressing into cold commissioning, we are working hard and working together to leverage lessons learned and achieve our shared goal of safe and successful operations," EM Principal Deputy Assistant Secretary Mark Whitney said.

Rep. Chuck Fleischmann (R-Tenn.), who chairs the caucus, voiced support for EM's cleanup and called it a national effort.

"I'm so proud of the folks in this room: the contractors, the workers, the affected communities who come together in a strong bipartisan way to advocate for cleanup of these legacy sites," Fleischmann said. "You're doing a great job. It's an important job. It's a federal obligation. These are sites that need to be cleaned up." Reps. John Shimkus (R-Ill.) and Brad Wenstrup (R-Ohio) also participated in the event and shared their support for EM's cleanup efforts.

Caucus Chairman Rep. Chuck Fleischmann welcomes people attending the event.

Caucus Chairman Rep. Chuck Fleischmann said at the event, "We're getting the job done and I'm so proud of you all."

Rep. John Shimkus said the House Nuclear Cleanup Caucus helps maintain focus on the end goal of remediation and cleanup of EM sites.

Rep. Brad Wenstrup talked about the importance of cleanup to the people of Pike County, Ohio, the home of EM's Portsmouth Site.

Whitney joined Parsons Senior Vice President and Salt Waste Processing Facility (SWPF) Project Manager Frank Sheppard and Bechtel National Inc. Waste Treatment Plant (WTP) Project Director Peggy McCullough on a panel moderated by Energy Facility Contractors Group Board of Directors Chair Billy Morrison that focused on the timely issues of startup and commissioning of key EM facilities.

Sheppard noted that SWPF has entered the testing and commissioning phase after finishing construction eight months ahead of schedule and more than $60 million under budget based on the company's contract arrangement from June 2013.

Sheppard emphasized that safety is the top priority, and he noted the importance of lessons learned from other projects.

"The top priority for us is to make sure everything we do is done safely and in order to do that you have to take your experiences from other places," he said. "There is a lot of cross-

fertilization within the Department and within the contractor community to make sure we capture lessons learned and to make sure we start up the facility safely and efficiently."

McCullough discussed the benefits of the sequenced startup and commissioning approach at Hanford's WTP that will treat tank waste and transform it into stable glass. The sequenced approach will enable waste to be treated prior to completion of the entire WTP complex through DFLAW.

In addition to making glass as soon as 2022 and reducing risks at Hanford's tank farms, the DFLAW initiative will reduce operational risks and add a higher degree of confidence to the tank waste treatment process at Hanford.

McCullough described Bechtel's operational readiness review approach as robust and spoke about lessons learned to be applied to the startup of DFLAW. In explaining Bechtel's approach to startup, the project director said Bechtel will use a progressive testing strategy that involves moving from the component level to the system level to an integrated facility test.

Whitney noted progress at WIPP, including significant changes to safety management programs, and outlined the steps necessary to develop proficiencies and test capabilities for site workers, equipment, and processes before restart.

"There has been a tremendous amount of work on recovery and we are moving forward on that with the plan to resume operations by December of this year, as long as it is safe to do so." he said.

The panelists also discussed collaborative efforts across the complex and the world to study best practices that can be applied at multiple facilities and ways to prevent or solve challenges experienced in the past.

The third event for the caucus is scheduled for Sept. 14.

Back to Top

Los Alamos Field Office Installs Additional Safety Measure to Drums

Workers install filtration systems to the RNS drums.

LOS ALAMOS, N.M. – EM's Los Alamos Field Office and contractor Los Alamos National Security, LLC (LANS) recently completed installation of high efficiency particulate air (HEPA) filtration systems to remediated nitrate salt (RNS) drums.

The HEPA filters will eliminate pressure buildup within the drums, which are located at Los Alamos National Laboratory (LANL). In the unlikely event a filter becomes clogged, a pressure relief disc will operate to release pressure.

"Ensuring RNS drums are in the safest possible configuration is our top priority. We are confident that this additional layer of defense for RNS drums will prevent a radiological release similar to what occurred at the Waste Isolation Pilot Plant (WIPP)," said Doug Hintze, manager of the Los Alamos Field Office.

The RNS waste is stored in drums like the ones pictured here.

A HEPA filtration system was installed on the lids of the RNS drums.

The procedure for adding the filters was completed in carefully planned stages, the last of which involved installing the devices to the lids of the RNS drums over the course of several days.

After the radiological event on Feb. 14, 2014 at WIPP, DOE scientists from several national laboratories conducted extensive experiments and modeling studies to determine what caused the RNS drum to breach. These investigations revealed an incompatible mixture of nitrate salts and an organic absorbent created conditions that resulted in an exothermic reaction that led to a drum breach and radiological release.

As part of this research, two additional parameters were determined to be critical to control an unwanted reaction: temperature and pressure. The information gained from scientific experiments and associated research have helped DOE and LANS develop robust measures for safe storage of the RNS drums located at LANL.

Since the WIPP event, comprehensive measures have been employed to ensure the RNS drums remain at a safe temperature. Additionally, in the summer of 2015, LANS installed a supplemental cooling system in the climate-controlled structure where the RNS drums are stored. The temperature of the RNS drums are monitored and inspections are conducted daily.

A plan for the treatment of the RNS drums is being developed. After the drums are treated, they will be ready for shipment offsite.

Back to Top

Oak Ridge Community Meeting Focused on Enabling Future Missions

OREM Manager Sue Cange tells attendees about the organization's budget and planning process, including its funding levels, commitments, and near-term priorities.

OAK RIDGE, Tenn. – The Oak Ridge Office of Environmental Management (OREM) recently hosted its annual community workshop, an event intended to raise awareness about the organization's budget and planning process, including its funding levels, commitments, and near-term priorities.

OREM uses the meetings to inform residents about the local cleanup program's ongoing projects, and its future cleanup plans for the East Tennessee Technology Park (ETTP), Y-12 National Security Complex, and Oak Ridge National Laboratory (ORNL). The event is open to the public and provides the opportunity for a two-way dialogue with attendees.

"These meetings are valuable to us because they give us a great forum to share information and engage with community members and local officials to hear feedback and new perspectives," OREM Manager Sue Cange said,

This year's agenda had an eye toward the future and focused on how the cleanup program enables the missions at Oak Ridge's three primary campuses. Panel members from the site's major contractors — Consolidated Nuclear Security, UT-Battelle, and URS | CH2M Oak Ridge (UCOR) — discussed the ongoing missions at their respective campuses and how the environmental cleanup planned or underway will make their visions possible.

UCOR panelist Steve Dahlgren, who serves as the project manager for deactivation and decommissioning, environmental remediation, and closure, said employees are working toward achieving Vision 2016 and Vision 2020 at ETTP.

These two goals play a pivotal role in the Oak Ridge Reservation's landscape and hold significant economic potential. Vision 2016 is EM's goal to remove all five of the former uranium enrichment plants at Oak Ridge by the end of 2016, and Vision 2020 is the goal to complete cleanup and transfer the site as a private industrial park by 2020.

Left to right, panelists Lee McGetrick, Jane Nations, and Steve Dahlgren talk with moderator Ken Rueter about how OREM is enabling future missions at their respective sites.

Y-12 Site Master Planner Jane Nations said planning is already underway with OREM to remove the old, contaminated Manhattan Project and Cold War facilities at Y-12, paving the way for a safer, modern campus with space for new national security missions.

First, however, OREM announced it is designing and constructing a mercury treatment facility that will control potential increases in mercury releases during the demolition of buildings where large amounts of mercury was used for operations decades ago. The cleanup program will also need a second onsite disposal facility that offers the capacity needed for the debris from the demolished facilities.

Lee McGetrick, ORNL's nuclear infrastructure program manager, talked about the laboratory's ongoing advances at the site, whether it's taking a leadership role in exploring exascale supercomputing, developing next generation manufacturing technologies and materials, or conducting advanced nuclear modeling and simulation.

While ORNL has undergone extensive modernization efforts on the east and west portions of the campus during the past decade, OREM is needed to remove contaminated facilities in the older, central campus area. This valuable real estate would provide the ideal location for future science and energy missions.

In addition to planning and preparing these facilities for removal, OREM is processing and shipping waste and materials from ORNL, thereby improving safety and reducing the current security level required at the site.

"We've made tremendous progress, but there's much more work to do," said Cange. "Fortunately, Oak Ridge's federal programs and contractors have an outstanding partnership and worked together to develop a unified vision and strategy that allows us to accomplish far more."

Back to Top

Ancillary Building Demolition at Plutonium Finishing Plant Complex

RICHLAND, Wash. *– Progress toward demolition at the Plutonium Finishing Plant (PFP) on the Hanford Site continued with the safe demolition of a small building near the main PFP complex this month. The building once housed testing equipment for water effluent that came from PFP. Overall, 92 buildings made up the PFP complex, and about 24 remain. EM and contractor CH2M HILL Plateau Remediation Company are working to safely prepare the remaining buildings for demolition, including the four main processing buildings, which involves some of the most hazardous work at the site.*

Back to Top

Richland Operations Office Makes Progress Removing Drums at Hanford Site

Crews process some of the roughly 1,700 drums of waste that have been processed at the 618-10 Burial Ground.

RICHLAND, Wash. – EM's Richland Operations Office (RL) and cleanup contractor Washington Closure Hanford (WCH) have excavated and processed the majority of drums at the 618-10 Burial Ground, one of the Hanford Site's most hazardous burial grounds.

Since beginning cleanup of the burial ground in April 2011, workers have dug up and processed about 1,700 drums of waste from the trenches. The most contaminated drums are lined inside with concrete to shield high-dose waste material. The drums are treated in a steel box where the waste material is crushed and mixed with grout and solidified before being sent

to the Environmental Restoration Disposal Facility (ERDF), Hanford's onsite landfill for low-level, radioactive, and chemical mixed waste.

"This is a safe way to process the waste and prepare it for disposal, and it avoids the cost of storing and deferring treatment of the waste," said Mark French, EM federal project director for the River Corridor. Other drums excavated have contained depleted uranium shavings in oil, oxide powders, and miscellaneous debris.

Work also continues to remediate 94 buried vertical pipe units that contain moderate- to high-activity waste. Because part of the trenches are close to the vertical pipe units, the remaining drums will not be removed until the vertical pipe unit cleanup is completed. WCH estimates there could be nearly 300 drums remaining in the trenches.

"We've made remarkable progress cleaning up the burial ground thanks to a team committed to working safely and efficiently on an everyday basis," said Scott Sax, WCH president and project manager. "The site is full of unknown hazards, which require careful, detailed planning and deliberate execution. I could not be more proud of the entire 618-10 project team and those who have supported the cleanup effort."

In addition, workers have removed about 350,000 tons of contaminated soil and other miscellaneous items such as glove boxes and process equipment. The majority of waste has been disposed of at ERDF.

Back to Top

EM Site Puts Environmental Database Online

Larry McCandless of Fluor-BWXT Portsmouth demonstrates the use of the GIS viewer.

PIKETON, Ohio – Environmental sampling data at EM's Portsmouth Site is now accessible to the public through an enhanced geographic mapping tool on the Internet.

The tool offers access to information such as publicly available environmental documents, and groundwater-level and analytical data.

The Portsmouth/Paducah Project Office (PPPO) Environmental Geographic Analytical Spatial Information System (PEGASIS) features an external GIS (Geographic Information System) and analytical data viewer that provides easy access to environmental data previously attainable only through a formal Freedom of Information Act request.

PEGASIS can be accessed here.

"PEGASIS promotes open government by allowing users to conveniently access the system," said PPPO's Richard Bonczek. "This information about the Portsmouth Site can be used for a variety of purposes and EM is glad to provide this resource to the public."

The user interface and display tools for PEGASIS were developed with input from various stakeholders, including EM and its contractors, regulatory agencies, and members of the public.

Larry McCandless, GIS manager for Portsmouth decontamination & decommissioning contractor Fluor-BWXT Portsmouth (FBP), said thanks to a lot of help from site information technology personnel, EM guidance, and the sample and data management team, FBP has achieved its goal of helping establish a user friendly tool.

"We hope users of the application find it and the user guides easy and enlightening to use," McCandless said.

A similar PEGASIS site was developed for EM's Paducah Site in Kentucky in 2012, which is maintained by deactivation contractor Fluor Federal Services, Inc. The Kentucky Research Consortium for Energy and Environment pioneered the Paducah Data Warehouse system — the forerunner to PEGASIS — several years ago as part of an EM grant to the University of Kentucky. Developers incorporated base code from the Paducah system into the Portsmouth Site's PEGASIS.

Back to Top

Engineers Go Mobile with Tablets, Bring Benefits to Waste Treatment Plant Project

Bechtel employees Jared Thomas (left) and Brian Tyrrell at WTP.

RICHLAND, Wash. – Jared Thomas has been hard to find at his desk lately. And that's a good thing.

As a field engineer with EM contractor Bechtel National Inc. at the Office of River Protection (ORP) Waste Treatment and Immobilization Plant (WTP), Thomas spends more time working in the facilities under construction thanks to recent deployment of hybrid tablets.

The tablets allow hundreds of WTP engineers, like Thomas, to perform their work from any safe, Wi-Fi-enabled location at the 65-acre construction site. The flexibility is saving time, increasing efficiency, and improving quality at the massive construction project.

"Anything I was doing on my desk workstation I can now do in the field," Thomas said. "As a field engineer, spending more time with my crew allows me to be more efficient in doing my work, more proactive in identifying issues, and more accessible to answer questions."

WTP management has been searching to equip employees with a single remote-computing device that is powerful enough to fully integrate critical project software and secure enough to operate within stringent DOE and Bechtel security protocols.

With the hybrid tablet in hand, Thomas submits and signs inspection records, generates field changes, and documents corrective actions on the spot. He saves printing costs by pulling up the latest documents, drawings, and 3-D models electronically. Instant access to the WTP network ensures quality by allowing him to always pull up the most current revisions.

He also is connected instantly via webcam and instant messaging. By firing up the front- or rear-facing camera, Thomas can have real-time discussions about issue resolution with project employees in Richland, Reston, Va., or San Francisco.

Bechtel employees, left to right, Micah Hart, Brian Tyrrell, Jared Thomas, and Aaron Rackleff (in background) at WTP.

WTP will be the world's largest radioactive nuclear waste vitrification facility and is being designed and constructed by Bechtel for ORP. When complete, it will vitrify most of the 56 million gallons of the country's most complex nuclear waste currently stored in tanks on the Hanford site.

"I am encouraged to see cutting-edge technology be applied to the construction of WTP," ORP WTP Project Assistant Manager Bill Hamel said.

The portable device can function as a laptop through use of a detachable keyboard or as a standalone tablet with full-touch interface. It also can perform as a desktop workstation through wireless docking that connects a keyboard and dual monitor setup.

The technology also has prompted field engineers to further innovate. Emergent capabilities involving electronic forms, automated reporting, and use of 360-degree video are enhancing quality and task efficiency.

"The time and budget resources applied to automation will promote efficient execution of the WTP mission, which will bring us closer to treating Hanford's tank waste," said Mike Costas, Bechtel's manager of quality and functions at the WTP project. "Clearly, innovation within WTP construction is on course."

Back to Top

Portsmouth Site Breaks Ground For Waste Disposal

PIKETON, Ohio *– Work has begun on a sediment pond at the On-site Waste Disposal Facility (OSWDF) site in the northeast area of EM's Portsmouth Site. The OSWDF will be a state-of-the-art permanent disposal site for materials coming from the deactivation and decommissioning (D&D) of the former Portsmouth Gaseous Diffusion Plant. Upon completion, the 100-plus-acre facility will include multiple layers of constructed and natural liners below and above, with a grass-covered surface. In 2015, EM selected OSWDF for certain demolition and environmental remediation waste to be safely disposed of onsite as part of its record of decision regarding disposition of the bulk of materials generated from D&D of more than 300 buildings and systems. The first waste placement is anticipated in late 2019. Shown (from left): EM Portsmouth Site Director Dr. Vincent Adams, Fluor Government Group Environmental & Nuclear Business Line Senior Vice President Greg Meyer, Fluor-BWXT Portsmouth (FBP) Deputy Site Project Director Jeff Stevens, EM Portsmouth/Paducah Project Office Acting Manager Robert Edwards, FBP Site Project Director Dennis Carr, EM Portsmouth Site Lead Joel Bradburne, and EM Portsmouth OSWDF Federal Project Director Johnny Reising.*

Back to Top

Two EM Contractors Are Among Fiscal Year 2015 Small Business Award Winners

A physical security specialist with Wastren-EnergX Mission Support, LLC conducts a secured-area inspection as part of the contractor's security oversight duties at the Portsmouth Gaseous Diffusion Plant Site.

WASHINGTON, D.C. – Two contractors supporting EM cleanup have been recognized with awards from DOE's Office of Small and Disadvantaged Business Utilization.

Wastren-EnergX Mission Support, LLC (WEMS) was named Small Business of the Year. The firm was a joint venture created by Wastren Advantage, Inc. and EnergX LLC to provide facility support services at the Portsmouth Gaseous Diffusion Plant in Piketon, Ohio.

Patrick Marmo, manager of procurement at CH2M HILL Plateau Remediation Company (CHPRC) in Richland, Wash., was named Federal Management Contractor Procurement Director of the Year.

Award winners were recognized at the 15th Annual DOE Small Business Forum & Expo held recently. The complete list of awardees is here.

WEMS incorporated safety, quality, sustainability and security into its fiscal year 2015 work, resulting in sustained safety performance, uninterrupted services, an improved infrastructure, solutions to support the fiscal year site mission goals, and exceeding cost savings goals — all while promoting and maintaining a strong safety culture and at a cost significantly under budget, according to its award.

In fiscal year 2015, WEMS performed its work at 11 percent under budget, totaling $3.1 million. It participated in DOE's Supply Chain Management Center (SCMC) program, enabling it to maximize procurement cost savings. It also successfully implemented "eAuction" and "eCatalog" tools and utilized SCMC management agreements to exceed strategic sourcing goals.

The contractor identified and acquired excess electronic property from other government agencies, avoiding $96,000 in costs. It also improved workforce ergonomics by using a $30,000 Ohio Bureau of Worker's Compensation grant to contact an ergonomist to evaluate work scopes, and buy equipment for records management and shipping and receiving.

"We want to thank EM and the Portsmouth/Paducah Project Office for a partnering relationship of open communication, respect, and trust," said Damon Detillion, project manager for WEMS and now current infrastructure contractor Portsmouth Mission Alliance, LLC. "The WEMS employees, who accepted the responsibility to work safely while proactively serving the customer, are very deserving of this prestigious award."

Patrick Marmo, manager of procurement at CH2M HILL Plateau Remediation Company in Richland, Wash.

Marmo implemented several noteworthy practices, including supporting a CHPRC initiative to select small business construction firms with quality assurance programs. As a result CHPRC's construction subcontracting is now performed primarily by small businesses.

Marmo also orchestrated the qualification of a woman-owned small business to be included in a pool of eligible well-drilling companies. As a result, awards to woman-owned small businesses increased by 72 percent, or $9.6 million, in fiscal year 2015.

"The successful candidate has displayed leadership and commitment to maximizing small businesses utilization through policies, procedures, outreach, and creating an atmosphere of "small business first" throughout their organization," according to the award announcement.

Back to Top

Savannah River Remediation's Interns Arrive

This year's Savannah River Remediation summer interns have arrived. The 42 interns include (front row; left to right) Casey Rhodes, Logan Tihey, Jonathan Townsend, A'jay Jones, Victoria Truelove, Ximena Vasquez, Christopher York, Brandon Byers, Tu Nguyen, Tristen Fields, Zoe Wesley, Briana Young, Meredith Williamson, Robert Morgan, Jennifer Herbert, and Keaton Thurmond; and (back row; left to right) Eric Patterson, Jake Mellon, Tom Hampton, Lee Girardeau, Eddie Dernar, Michael Harris, Paul Jackson, Greg Head, Vondray Sanford, DJ Roberts, Christopher Turner, Hunter Norris, Brock Metzger, Constance Kinney, Taylor Schneider, and Michael Jaffe. Brad Lloyd, Curtis Wilson, Raven Woods, Belinda Owusu, Alton Turner, Jabril McKevie, Stuart Ralston, Austin Long, John Kolbeck, and David Webb are not pictured.

AIKEN, S.C. – Through its summer internship program, EM's liquid waste contractor at the Savannah River Site has gained 42 interns eager to gain hands-on experience in fields ranging from engineering to law.

The Savannah River Remediation (SRR) interns represent schools from around the South East, including the University of South Carolina, Clemson University, the University of Georgia, Georgia Institute of Technology, Georgia Southern, Florida State University, the University of Alabama, Tuskegee University, University of Tennessee-Knoxville, Aiken Technical College, Augusta University, Mars Hill University, and Meredith College.

However, SRR internships are not exclusive to the South, employing students from as far away as Excelsior College in New York, the University of Illinois, the University of Akron in Ohio, and the Missouri University of Science and Technology.

Taylor Schneider, a mechanical engineering major from Clemson University, said that she hopes to gain real-world experience while working with the Salt Waste Processing Facility Integration Team this summer.

"The reason I accepted an internship at SRR was because I no longer wanted to only see a pump as something drawn on a piece of paper, but actually as a tangible machine that I could interact with," she said.

In addition to students from the full spectrum of engineering disciplines, this year's interns are working toward degrees in programs such as business, information technology, emergency management, statistics, and communications.

SRR summer interns will also have the opportunity to give back to the local community and support organizations such as the United Way.

Allison Brown, summer intern program coordinator, said SRR not only supports the nuclear industry, but also the local community.

"Our interns are encouraged to embrace and uphold SRR's community values in order to gain the full experience of working with our company," Brown said.

Of the 42 interns, six are involved in the school-to-work program, which promotes work-based learning in occupational areas that may be pursued as future careers. Three SRR interns are participating in DOE's Mentorship for Environmental Scholars, a program that provides exposure to laboratory research in the computer and environmental sciences to college students.

Back to Top

Contributors

Peter Bengtson, Hanford Site
Destry Henderson, Hanford Site
Steven Horak, Los Alamos Field Office
Ian Klei, Hanford Site
Brad Mitzelfelt, Portsmouth/Paducah Project Office
Michael Nartker, EM Headquarters
David Sheeley, EM Headquarters
Michelle Teeters, Portsmouth Site
Stephan Tetreault, EM Headquarters
Keaton Thurmond, Savannah River Site
Ben Williams, Oak Ridge Site

Back to Top